

Central Shops Sludge Lagoon

Background

The Central Shops Sludge Lagoon is located southwest of the Central Shops area. The lagoon is approximately 60 feet long by 40 feet wide by 10 feet deep.

The lagoon was placed in service in the early 1950s to treat sanitary waste by oxidation and other degradation processes. During peak operation, the lagoon received about 100,000 gallons of sludge per year. In the mid 1970s, the lagoon stopped receiving sewage, but it was used as an evaporation pond for treated sewage sludge until 1986.

The Savannah River Site (SRS) shut down the lagoon in 1988 under the auspices of a South Carolina Department of Health and Environmental Control (SCDHEC) permit. The closure involved removal of the sewage sludge and two feet of underlying soil and its land application to borrow pits at K Area and Par Pond.

Environmental Concerns

No documentation exists to indicate the lagoon received hazardous waste. However, soil samples taken in 1988 showed elevated concentrations of heavy metals (including aluminum, arsenic, lead, barium, nickel, chromium, selenium, mercury, and cadmium), the presence of volatile organics, and the pesticide Chlordane at 14-19-feet below the surface. In 1992, a soil-gas survey was conducted, and no hydrocarbons or chlorinated solvents were found.

Environmental Actions and Plans

In 1998, SRS submitted a RCRA Facility Investigation/Remedial Investigation (RFI/RI) Work Plan to the U.S. Environmental Protection Agency (USEPA) and SCDHEC. Both regulatory agencies approved the Work Plan. In 1999, SRS began and completed Phase I characterization of the site and initiated Phase II characterization. The central manhole located adjacent to the asphalt storage area was grouted and its accessibility restricted.

In 2000, SRS submitted a RFI/RI and Baseline Risk Assessment to the USEPA and SCDHEC. Both regulatory agencies approved the RFI/RI and Baseline Risk Assessment. The Department of Energy (DOE), USEPA, and SCDHEC made a decision to delete the Corrective Measures Study/Feasibility Study (CMS/FS) and develop the Statement of Basis/Proposed Plan (SB/PP) and Record of Decision (ROD).

The decision to eliminate the CMS/FS was based on the findings in the analyses of the RFI/RI and Baseline Risk Assessment. It revealed no refined constituents of concern were present in the groundwater and further revealed that there are negligible risks to human health and the environment in the soil.

In 2001, SRS submitted the SB/PP to the USEPA and SCDHEC. Both regulatory agencies approved the SB/PP in July 2001. The preferred remedial action of the SB/PP is a No Action Alternative. SRS submitted the ROD Remedial Alternative Selection to the USEPA and SCDHEC in October 2001. Both regulatory agencies approved the ROD Remedial Alternative Selection in January 2002, as No Action.